

# Notice of Allowability

Application No.

10/762,029

Examiner

James W. Rogers, Ph.D.

Applicant(s)

DING ET AL.

Art Unit

1618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/11/2006.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☒ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20070202.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

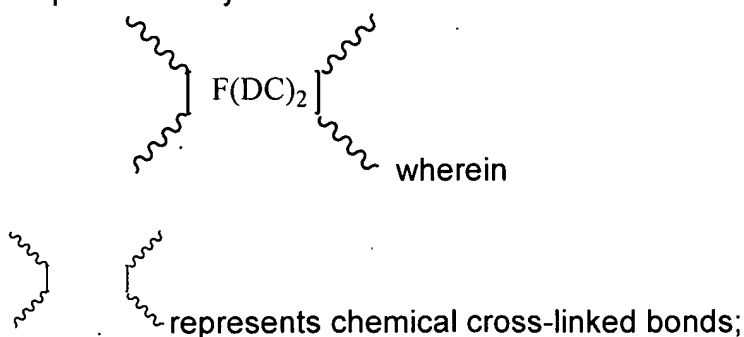
Authorization for this examiner's amendment was given in a telephone interview with Maria C.H. Lin on January 19<sup>th</sup>, 2007.

The application has been amended as follows:

Claims 10-44 have been cancelled.

Claim 1 has been replaced with the following version:

1. A method of preparing a thermosensitive and biodegradable microgel wherein  
a) the microgel has a chemically cross-linked network comprising at least one negative temperature-sensitive macromolecule and one biodegradable group  
represented by structural formula:



$F(DC)_2$  represents a polymeric chain between the cross-linked bonds; F is a temperature-sensitive block copolymer of poly(ethylene oxide) (PEO) and poly(propylene oxide) (PPO); D is a biodegradable moiety; and C is a cross-linked moiety

- b) the microgel is in the form of microparticles prepared by the following steps:
  - i) co-polymerizing a biocompatible polymer or oligomer F with an internal ester D by ring opening polymerization of D in the presence of F using a catalyst; wherein F is a temperature-sensitive polymer or oligomer; D is a biodegradable moiety;

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- ii) end capping the copolymer with a crosslinkable moiety C to provide a macromer with crosslinkable ends;
- iii) cross linking the crosslinkable end(s) of the macromer to form the microparticles of the microgel by inverse suspension polymerization, wherein the continuous phase is a water-insoluble organic solvent and the dispersion phase consists of a hydrophilic medium in which the macromer is present.
- c. the microgel is useful for encapsulating a drug post polymerization; and
- d. the drug encapsulated microgel is injectable into the body.

Claims 2-9 the phrase in line 1 of each phrase "The thermosensitive and biodegradable microgel" is deleted and replaced with "The method" in line 1 of claims 2-9.

***Statement of Reasons for Allowance***

The following is an examiner's statement of reasons for allowance: The method to make the thermosensitive and biodegradable microgel by inverse suspension polymerization as recited in claim 1 is free of the prior.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

  
MICHAEL G. HARTLEY  
SUPERVISORY PATENT EXAMINER